

WHAT IS CLAIMED IS:

1. A purified polypeptide comprising an amino acid sequence that is at least 85% identical to the amino acid sequence of SEQ ID NO: 2.

5 2. The purified polypeptide of claim 1, wherein the amino acid sequence is at least 90% identical to the amino acid sequence of SEQ ID NO: 2.

3. The purified polypeptide of claim 2, wherein the amino acid sequence is at least 95% identical to the amino acid sequence of SEQ ID NO: 2.

10 4. The purified polypeptide of claim 3, wherein the amino acid sequence is the amino acid sequence of SEQ ID NO: 2.

5. An isolated nucleic acid encoding the polypeptide of claim 1.

6. An isolated nucleic acid encoding the polypeptide of claim 2.

7. An isolated nucleic acid encoding the polypeptide of claim 3.

8. An isolated nucleic acid encoding the polypeptide of claim 4.

15 9. The isolated nucleic acid of claim 8, wherein the nucleic acid sequence is the nucleic acid sequence of SEQ ID NO: 3.

10. The isolated nucleic acid of claim 5, further comprising an operably linked heterologous promoter.

11. A method comprising:

- (a) providing a polypeptide comprising the amino acid sequence of SEQ ID

NO:2;

- (b) contacting a test compound to the polypeptide; and
- (c) detecting binding of the test compound to the polypeptide.

12. The method of claim 11, further comprising:

- (d) measuring an GS-like activity of the polypeptide.

13. The method of claim 11, further comprising:

- (d) providing a second polypeptide, wherein the second GS-like polypeptide is a plant or mammalian GS-like polypeptide;
- (e) contacting the test compound to the second polypeptide; and
- (f) detecting binding of the test compound to the second polypeptide.

14. A method comprising:

- (a) providing a polypeptide comprising the amino acid sequence of SEQ ID

NO:2;

- (b) contacting a test compound to the polypeptide; and
- (c) measuring a GS-like activity of the polypeptide, wherein a change in GS-like activity relative to the GS-like activity of the polypeptide in the absence of the test compound is an indication that the test compound alters the activity of the polypeptide.

15. The method of claim 14, further comprising:

- (d) providing a second polypeptide, wherein the second GS-like polypeptide is a plant or mammalian GS-like polypeptide;
- (e) contacting the test compound to the second polypeptide; and
- (f) measuring an GS-like activity of the second polypeptide.

16. An antibody that binds specifically to a polypeptide consisting of SEQ ID NO: 2

17. An isolated nucleic acid comprising a strand that hybridizes under high stringency conditions to a single stranded probe, the sequence of which consists of SEQ ID NO: 1 or the complement of SEQ ID NO:1.

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